

Abstract

The invention relates to a method and a circuit arrangement for operating a solenoid actuator with a permanent magnetic hold mode. The invention aims to solve the problem of securely transferring the solenoid actuator to the drop-off state of the armature, both after switching off the control voltage and when switching defects occur. To achieve this, once the control voltage (V_i) has been applied, a control circuit is initialised, the charging of a charge accumulator is triggered (C1), a closing coil (L1) is activated and then deactivated once the hold state has been attained and once the control voltage (V_i) has been removed, a primary shut-off coil (L3) for discharging the charge accumulator (C1) and initiating the transfer to the drop-off state is activated. An intermittent current supply, which is repeated at intervals to the primary shut-off coil (L3) and to an auxiliary shut-off coil (L4) that is redundant when the other coil is activated, enables both coils to be continually tested. If the test result is negative, the respective other shut-off coil (L4) or (L3) is activated to achieve the drop-off state and the control voltage (V_i) is then permanently deactivated.